COMPUTATION OF TRUCKS AND GASOLINE REQUIRED FOR CONTINUOUS MOVEMENT OF SUPPLIES

Factors assumed: 1) trucks travel 5 mph for 12 hours/day or 60 miles/day
2) trucks use gasoline at the rate of 6 miles/gal
3) each truck carries 3 tons pay load

Trucks

For a distance of 275 miles, 5 days would be required for the one-way trip (275 ÷ 60 = 4.6, rounded to 5) or 10 days for the round trip by each truck.

If 12 tons is to be delivered each day, 4 trucks (12 ÷ 3 tons) must arrive at the end of the route each day. In total, 20 trucks (4 per day X 5 day) must be enroute in one direction to permit 4 to arrive each day and another 20 trucks must be moving back along the route. Thus, $\frac{12 \text{ tons to be delivered}}{3 \text{ tons/truck}} \times \frac{275 \text{ mi.}}{60 \text{ mi.}} \times 2 = 40$ trucks being used enroute. Normally a 20 percent allowance is added for vehicles being repaired and non-load vehicles. In addition, 5 percent more should be added to the total vehicle park to account for normal vehicle replacement, if the supply movement is continued for more than a short period of time.

$$40 \times 125\% = 50 \text{ trucks}$$

If 50 trucks are available, an additional requirement of about 5 percent for trucks to haul gasoline probably need not be added.

Gasoline Used on a Monthly Basis

While in operation each truck uses 300 gallons or nearly a ton (324 gallons) per month, computed as follows:

$$\frac{60 \text{ miles per day}}{6 \text{ miles per gallon}} = 10 \text{ gallons/day} \times 30 \text{ days} = 300 \text{ gallons}$$

Therefore, the 40 trucks used enroute in the above movement would require nearly 40 tons/month (more accurately $\frac{40 \times 300 \text{ gallons}}{324 \text{ gal/ton}} = 37$ tons)

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CENTRAL INTELLIGENCE AGENCY

OFFICIAL ROUTING SLIP

TO	NAME AND ADDRESS	DATE	INITIALS
1	Chief D/T		
2			
3			
4			
5			
6			

	ACTION		DIRECT REPLY		PREPARE REPLY
	APPROVAL		DISPATCH		RECOMMENDATION
	COMMENT		FILE		RETURN
	CONCURRENCE	X	INFORMATION		SIGNATURE

Remarks:

Attached is a brief rundown on the methodology we are using. We are investigating further the assumption of 6 mi/gal. Apparently DIA is using a little over 4 mi/gal in the Chinese Threat to Southeast Asia SNIE. Chief T/RK has seen this methodology and wants us to look into the the gasoline consumption.

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